Partnerships have long been a characteristic of the semiconductor business. It is no different for III-Vs and in the downturn we are seeing more of these every week. To a large extent this is a reflection of the huge investments and shortage of funds.

But there are other reasons in today's depressed marketplace. The conditions are such that the more opportunistic players with the purchasing power are able to score bargain deals with those having a capacity surplus.

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Normal rules do not apply

Today's semiconductor industry is made up of two basic streams: intellectual property (IP) and manufacturing. Sharing both through licensing deals is common practice. Usually, however, this involves some sharing with others, i.e. only a few partnerships are strictly one-to-one. Similarly, the more strategically important the subject of the deal, the higher the money involved.

There are of course exceptions to these generalisations. From time to time there arise circumstances when normal rules only partly apply. One topical example has been Nichia following Cree's example and coming to some mutually satisfying arrangement as regards some of its nitride technology. Almost from the outset Cree decided that its preferred route was licensing. Nichia chose to defend its position and has likely lost money instead. No one rule suits everyone and being flexible is often a useful means for survival in a harsh business climate.

This brings us around to other less conspicuous deals which are being struck around the world. Shy of the news media, businesses are getting together to secure technology and manufacturing deals for quite a range of semiconductor materials, devices and equipment. Some may come into the spotlight in due course, others may remain off-camera for the duration.

Not surprisingly in a world where technological advantage is so hard-won, companies are more defensive than ever where their IP is concerned. Sometimes IP is the only way they can eke out a living in a downturn. But some would say that is no replacement for manufacturing over the longer term. On the other side of the coin, there are those who want to sell their services so badly they have to offer them at bargain prices. A good example of this, the deals being negotiated with sub-contractors.

Some unusual offers are being struck between device companies for example. We have read about the arangement between TriQuint and Infineon or Raytheon's RF Components division forming a foundry alliance with Taiwan-based WIN Semiconductors last summer. That was interesting because it involved a technology exchange - seems Raytheon has set up WS to make the parts for them.

Companies that have chosen to relinquish manufacturing have opted to outsource their needs to merchant foundries completely. This may prove to be a short-term solution which backfires over the longer term, having been seen as expedient at the time.

Alternatively, companies might look to place part of their manufacturing needs with a company more suited to the task. Perhaps they want to concentrate on smaller runs of higher value added products and farm out volume business to someone else with a better match of processing capabilities. It is particularly attractive to do this at the moment because the bigger fabs are keener than ever to fill up their capacity.

Having expanded rapidly in the upturn they are now faced with huge overheads for partly idle fabs and equipment. Because of this their customers can seek to secure bargain deals.

However, the disadvantage for the supplier is that they might later regret having signed up such business at such low prices when the market picks up. It might turn out that your fab is filled up with cut-price contracts when big new orders come knocking.